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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,873	09/16/2003	Jacey Robert Beaucage	HSJ920030185US1	3112
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		EXAMINER		
		RACHUBA, MAURINA T		
		ART UNIT		PAPER NUMBER
		3723		

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,873

Applicant(s)

BEAUCAGE ET AL.

Examiner

M Rachuba

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/16/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 3 and 13-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2, 3, 13 and 14 limit the process steps of “the lapping plate rotates for a specific time so that adequate removal of material from the specimen occurs, and a lapping rate is determined from a change in the gap distance over a time interval, and the lapping rate and friction are then assessed to determine if the lapping plate is acceptable” and “the system determines a lapping rate of the lapping plate under a fixed load and a fixed rotation speed, such that a coefficient of friction and a Preston coefficient of the lapping plate can be calculated”. These process steps do not further limit the apparatus of claims 1 or 13, as there has not been structure previously recited which would perform these processes. Applicant can overcome this rejection by claiming the structure that performs these processes.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 8-11, 13-15 and 19-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Gitis et al, 6,257,953. Note that the fixture is the head **84**, and the guide is the structure that reciprocates and rotates the head. Please refer to column 6, lines 54 through column 7 lines 55, for a discussion of the fixture, the friction sensor, and the distance sensor (the AE sensors attached to the head give information about the amount of material removed from the specimen, which corresponds to a gap between the sensor and the lapping plate). Regarding the limitations directed to the process of rotating the lapping plate for a specific time, determining a lapping rate from a change in the gap distance over a time interval, assessing the lapping rate and friction to determine if the lapping plate is acceptable, and determining a lapping rate of the plate under a fixed load and a fixed rotation speed such that a coefficient of friction and a Preston coefficient of the plate can be calculated, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Here, the device disclosed by '953 is capable of providing the information needed to determine the lapping rates, friction, coefficient of friction and Preston coefficient.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 5, 12, 16, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gitis et al, '953. Regarding the types of sensors used, the examiner takes Official notice that the use of inductive sensors, or strain gauges to measure distance or frictional force is old and well known, and one of ordinary skill in the art would have considered it a matter of design choice as to the type of sensor used, dependent on the environment of use.

8. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gitis et al, '953 in view of Cote et al, 4, 910,155. '953 does not disclose a plurality of specimens, but does disclose that the AE sensors may be placed symmetrically about the head. '155 teaches that a plurality of specimens may be processed simultaneously. It would have been obvious to one of ordinary skill in the art to have provided '953 with a plurality of specimens as taught by '155, see the abstract, to provide a more economical process.

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9. Claims 1, 6, 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuhashi, US 2001,0007809 in view of Gitis et al, 6,257,953. '809 discloses everything claimed, including a fixture positioned adjacent to the lapping plate, the fixture having a stationary base, an arm mounted to and extending away from the base toward the lapping plate, and a guide feature mounted to the arm for contacting and supporting the holder with respect to the lapping plate, the guide feature comprising a set of guide wheels. '809 does not disclose friction detection means mounted to the fixture and a distance sensor mounted to the holder. '953, figure 1 and column 6, lines 54 through column 7 lines 55, for a discussion of the fixture, the friction sensor, and the distance sensor (the AE sensors attached to the head give information about the amount of material removed from the specimen, which corresponds to a gap between the sensor and the lapping plate), teaches providing a friction detection means mounted to the fixture and a distance sensor mounted to the holder. It would have been obvious to one of ordinary skill to have provided '809 with the friction detection means mounted to the fixture and a distance sensor mounted to the holder as taught by '953, figure 1 and column 6 lines 54 through column 7, lines 55, to allow better control and determination of conditioning processes for the lapping plate.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Other similar systems are cited of interest.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M Rachuba whose telephone number is 703-308-1361. The examiner can normally be reached on Monday-Thursday from 8:30 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail, can be reached on (703) 308-2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Rachuba
Primary Patent Examiner
4-Aug-04

A handwritten signature in black ink, consisting of a stylized 'M' followed by a series of loops and a long horizontal stroke extending to the right.